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THE NEWSMAGAZINE OF THE UNIVERSITY OF PENNSYLVANIA SCHOOL OF VETERINARY MEDICINE

NBC Sets
the Bar for
Biosecurity
and Equine
Medicine



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about the cover:

New Bolton Center's new James M. Moran, Jr. Critical Care Center, slated to open in June, sets the bar in biosecurity. Inset: The 2004 *Salmonella* outbreak at New Bolton Center and lessons learned during its cleanup, set the groundwork and standard of care for the new Moran Center facility.



On an icy Groundhog Day, I visited the nearly complete James M. Moran, Jr. Critical Care Center at New Bolton Center with the entire project management team. The project, in many ways, symbolizes who Penn Vet is and where Penn Vet is going.

We build on our historical strengths. We solve current problems. We look to the future. And at this moment, we are caught in fascinating juxtaposed circumstances. While we have exceptional resources and remarkable friends, we are also working within stringent financial limits.

To be concrete, we have lost more than 150 people since the summer of 2008, most through attrition but — painfully — almost 70 through “position discontinuations” (layoffs). By the summer, we will have a dozen fewer faculty members and a number of additional faculty have announced they will retire in the next few years. Because of the cuts in our Pennsylvania funding, we have come too close to having to shut down our Veterinary Center for Infectious Disease — a center whose tasks we are absolutely committed to in preparing for disastrous disease outbreaks.

We are more focused than ever on our core missions — teaching veterinary students, healing patients in innovative ways and moving the understanding and practice of medicine forward with fundamental and applied research to provide the best advanced training in the world.

The Moran Critical Care Center is a perfect symbol of our future and puts us at the forefront of treating large animals with suspected infectious diseases. Private practices do not have the capacity or mission to serve these patients, but we do.

Warm in color and in concept, the building’s physical layout will be conducive to human interactions and superb patient care. It is thoughtfully designed and the level of care it will make possible are incredibly impressive, oriented to both biosecurity and patient comfort — not to mention features that will be WONDERFUL for humans like the ability to provide optional remote video access to owners, trainers and referring vets to monitor the progress of their animals.

The juxtaposing circumstances existed, too, in the construction of this facility. While we were granted a generous state release of capital funding in 2006 and received a gracious naming gift from Mrs. J. Maxwell Moran (Betty Moran) in honor of her son, James, we were committed to ensuring the facility was value-engineered and would be delivered on time and within budget. And, of course, cuts in our Pennsylvania appropriation have at times threatened our ability to operate this state-of-the-art facility.



Photo by Lisa Godfrey

As you will see in reading this issue of *Bellwether*, we continue to use our experience and expertise to lead the veterinary profession. Whether it’s identifying new approaches to preventing, identifying and treating infectious diseases, or implementing monumental improvements in facilities and programs to set a new standard for patient care, research and teaching, Penn Vet will look forward to boldly accomplish our vision. We have come through some extraordinary times — recently and historically — with an ability to be agile, to adapt to losses, to make thoughtful — even if difficult — decisions. And we will be clear-eyed and positive about the consequences.

We are thankful for our friends and the private support we’ve received throughout these recent months, fully recognizing that it’s that kind of support that is so critical in getting us through these challenging times.

But what is currently in jeopardy — and in question — is our ability to convey to the public that veterinary schools and veterinarians are a public good and that the loss of public funding threatens the health and safety of the human populace. If we are successful, we can look to regain support for programs like consulting for the Center for Dairy Excellence; provide new and better surveillance for emerging diseases on farms, including those that spread from animals to people like H1N1; and reach out to treat working dogs, police horses, patients whose owners cannot afford veterinary care at full price; and subsidize training in farm and food animals to provide extensive hands-on experiences for more and more students interested in rural and food supply practice.

You, as a *Bellwether* reader, have a vested interest in Penn Vet’s success and can rally with us to craft and convey these important messages. We look forward to your help.

—JOAN C. HENDRICKS, V'79, GR'80
THE GILBERT S. KAHN DEAN OF
VETERINARY MEDICINE

NBC SETS THE BAR FOR BIOSECURITY

Lessons learned from a Salmonella outbreak set the scene for drastic, state-of-the-art improvements and peace of mind

BY MARGARET E. GUTHRIE

Six years ago, Penn Vet's New Bolton Center faced a daunting challenge.

In 2004, a *Salmonella* outbreak had devastating effects in the George D. Widener Hospital for Large Animals. It was one of the most severe setbacks of New Bolton Center's proud, 52-year history, and, while the effects of this catastrophe were well documented, less well known are the tireless efforts of the hospital's faculty and staff to correct the problem and prevent a recurrence.

The hospital re-opened after 10 weeks of extensive remediation, which included intense scrubbing and disinfection to removal and replacement of drains, floors and surfaces in the physical plant. At the same time the hospital's care delivery procedures underwent the closest possible scrutiny. The result? A dramatic reorganization of clinical personnel, greatly heightened infection surveillance measures and the implementation of rigorous biosecurity protocols.

"Rather than housing patients according to the condition with which they presented, they were now housed according to the level of risk of infection their illness or injury warranted," said Dr. Helen Aceto, who was named director of Biosecurity at New Bolton Center in 2004. Simply put, the protection of our patients from infectious diseases was – and remains – a preeminent priority.

The six-year culmination of these ever-evolving efforts comes to fruition this summer with the dedication of the James M. Moran, Jr. Critical Care Center. This state-of-the-art facility follows in the strong tradition of other groundbreaking New Bolton Center innovations in equine/large animal veterinary medicine such as the Jeffords Treadmill, the Connelly Intensive Care Unit, the Graham French Neonatal Section, the Scott Equine Sports Medicine Building and of course, the original George D. Widener Hospital for Large

Animals. This campus has long been a model for other large animal veterinary facilities, particularly in terms of the care provided critically ill patients, especially those with colic or infectious diseases requiring isolation.

Dr. Aceto explained that New Bolton Center sees some of the most seriously ill large animals in the mid-Atlantic region, and in numbers that few other hospitals can accommodate. The hospital's patient case load is one of the largest in North America and for many it is a last resort. So it has been especially vulnerable in terms of one of the late 20th and early 21st century health care menaces: hospital-acquired (nosocomial) infections.

The Horse – A Social Animal

A key factor in equine infectious disease vulnerability is the extraordinary degree to which horses travel and interact with other horses.

"Next to humans, horses may have the most social interactions of any mammal, certainly in terms of being exposed to other horses outside their immediate social group," said Dr. Aceto. "Racehorses commute between tracks; show, event, dressage horses and polo ponies travel to and from competitions; and backyard pleasure horses do trail-rides. This travel consistently exposes horses to with whole new populations of horses and people."

Travel creates stress for the horse, as does competition. New surroundings, strange schedules and possibly different food and water contribute to the likelihood of problems for the horse's immune system. A weakened immune system leaves a horse vulnerable to infection.

As a referral center New Bolton sees many patients whose immune systems may be compromised. In a recent paper



The 2004 *Salmonella* outbreak at New Bolton Center has devastating effects. The cleanup required a complete close-down of the hospital during which time staff came together to scrub down the entire facility.

co-authored by Dr. Aceto with Josie Traub-Dargatz, Paul Morley and Nathan Slovis, they write: “The very fact of hospitalization makes these animals different from the general population in that they are more likely to shed or acquire an infectious agent because they are more likely to be under stress, may be less able to respond immunologically, have altered nutrition, have disturbances in their normal flora, may be receiving antimicrobials, are concentrated in close proximity to other animals that have similar risk factors.” Additionally, those patients coming into a hospital provide an opportunity to introduce infectious organisms to naïve (uninfected) individuals that may be hospitalized at the same time.

The paper adds, “Those hospitals that accept referrals, emergencies and treat critical patients must seriously consider the need for a dedicated isolation unit sized for their caseload.”

In 2004, in its direct response to the *Salmonella* infection, New Bolton Center began categorizing incoming patients as high-, medium- and low-risk and dedicated the freestanding C. Mahlon Kline orthopedic building to housing a specific group of high risk patients – equine colics. Although numerous modifications were made to the C. Mahlon Kline building to ensure that it could fulfill that function as effectively as possible, it was not completely ideal in terms of infection control for the high-risk colic patient.

While the Widener Hospital has always had a facility dedicated to critically ill patients that require isolation, for today’s much greater and more complex patient caseload the current building is too small, lacks certain features necessary for state-of-the-art critical care and is inadequate from a biosecurity perspective. The Moran building addresses all three crucial issues: capacity, patient care and infection control. An added advantage of the eagerly anticipated opening is that the C. Mahlon Kline building will be able to return to its original intended use as a dedicated orthopedic facility with an adjacent procedures room; thereby also relieving pressure on other very busy clinical spaces in the Widener Hospital.

Not a Unique Challenge

The problem of hospital-acquired infections is certainly not limited to New Bolton Center. A paper published in the September 1, 2008* issue of the *Journal of the American Veterinary Medical Association* described a survey conducted

between July 2006 and July 2007 by researchers that included Dr. Paul Morley, director of Biosecurity for the James L. Voss veterinary teaching hospital at Colorado State University. The survey found that in the preceding five years, 31 of the 38 veterinary hospitals surveyed had experienced outbreaks of nosocomial infection. Twenty-two of the hospitals had to restrict admission at some time during the five-year survey period and 12 had to shut down completely for a period of time. Both the institutions that restricted admission and the ones forced to close for a period reported that the leading cause of nosocomial outbreaks was *Salmonella* followed by MRSA (Methicillin-resistant *Staphylococcus aureus*).

Less than 1 percent of healthy horses shed *Salmonella* while 10 – 12 percent of horses admitted with colic will shed the organism in their manure. That is why it is imperative to separate horses that are admitted with colic from the rest of the hospital population and why it is then important to have the ability to further isolate horses with colic that start to shed *Salmonella* from other colic patients.

According to Dr. Aceto, horses that require surgery to relieve the colic are three to five times more likely to shed *Salmonella* than horses with colic that respond to medical treatment. Published studies from the University of Florida’s equine hospital also revealed that colics requiring surgical intervention are at higher risk and that 10 percent of all horses admitted with colic were found to be *Salmonella* positive, a figure that is similar to reports from other veterinary treatment centers. In addition to changes in patient management and facilities, efforts have been made to improve testing so that *Salmonella*-positive patients can be detected at a higher level of sensitivity and with greater speed than was previously possible using conventional culture techniques. To this end, scientists at New Bolton Center validated and implemented a real-time PCR test that is both more sensitive than conventional culture, is capable of providing results overnight as opposed to three to five days later, and allows prompt initiation of containment and isolation measures.

These are the critical considerations that mandate a separate building, dedicated to the care of the highest risk patients, and built to the highest of standards of patient care and biosecurity, as an absolute necessity for any modern veterinary hospital, and why the doctors and nurses at New Bolton Center are so anxious to see the Moran Critical Care Center in use.



The new James M. Moran, Jr. Critical Care Center is a necessary, state-of-the-art addition to the New Bolton Center campus, which will ensure top-tier care for equine patients.

The Design

Containment and control are vital to stop the spread of infectious organisms. Controlling potential spread of infection at a large veterinary teaching hospital like Penn Vet's New Bolton Center requires enormous expenditures of effort, time and money when dealing with outdated facilities. And that is why New Bolton has moved aggressively to open new, thoughtfully designed isolation and critical care units. These new facilities incorporate important design elements essential to providing the



very best of care while maintaining as pristine an environment as possible. "The way that animals are moved, the way veterinary hospital stalls are cleaned, the way staff move from stall to stall, even the way air circulates all contribute to the ease with which infectious organisms can move about hospital wards (barns)," said Dr. Aceto.

The James M. Moran, Jr. Critical Care Center prevents direct interactions between patients. All stalls are completely self-contained with individual access from the outside. Each patient enters its stall by one door and exits the same way. Patients do not cross another's path; bedding is brought into each stall individually from the exterior and cleaned out the same way. Once removed, used bedding is immediately taken to a dedicated, semi-enclosed area located at the end of the building. This area is accessed on one side from the colic wing and from a different side by isolation. Waste material is deposited in a receptacle that is for the Moran Center and none other. The danger of contamination of other horses through the everyday maintenance of each patient's stall is greatly minimized. The center aisle of the facility is reserved for the use of medical staff and clean equipment only. Any clean equipment that enters a stall must be removed through the exterior door and returned to the clean corridor only after it has passed through the laundry and cleaning area (a "clean-to-dirty" movement pattern that is not reversed unless items have been re-cleaned).

Air circulation is a critical element in a high risk health care facility and has certainly been addressed in the Moran Center. The entire facility is environmentally controlled to provide the maximum in cleanliness and comfort. A particularly important feature is air pressurization of the central corridors relative to the stalls which ensures that all air transfers are from the clean hallways through the stall, to the exterior of the facility; when a stall door to the clean corridor is opened, instead of air rushing into the rest of the building from the stall, the air moves from the center hall into the stall, thereby maintaining integrity of the clean corridor. Each stall is independently ventilated. Air exchange ducts are located away from stall floors and are lined.

Stalls in the isolation wing incorporate additional biosecurity features that speak to the high risk nature of their patients in

that each has an antechamber between the central corridor and the stall. The antechamber is for storage of dedicated equipment and limited supplies for that particular patient. It also permits the removal and disposal of each caregiver's barrier garments before re-entering the clean corridor. Both the wall of the antechamber and the stall are equipped with a Plexiglas® window so that staff can observe the patients without intruding into the stall or disturbing the horse if it is not necessary. The stalls in the colic wing are also equipped with a Plexiglas® window for observation.

As well as key structural design, services fundamental to the type of sophisticated care that critically ill high risk patients require will be provided by the Moran Critical Care Center. For example, oxygen is directly delivered through a dedicated system to an outlet in each stall, a significant advancement over current housing for colics and isolated patients. Each stall has at least one camera to enable staff to view patients from a central nursing station, without entering the area. The mare-and-foal stalls have two cameras to ensure complete coverage of the area. Specialized system software will also allow clinicians to check on their patients from home or after hours via internet connection, significantly reinforcing the care of the on-site staff.

Both wings have procedure rooms with special dedicated adjacent storage, a vital necessity in a building housing such sick patients. In addition, each wing has a fluid storage area; sufficient capacity, a design whereby fluids can be delivered directly to the building by the palette-load, proximity and easy access are imperative for patients that may need between 20 to 60 liters of fluids in a 24-hour period.

The Moran building has 12 regular colic stalls plus two mare-and-foal colic stalls to accommodate the 425+/- cases of colic that come in each year. The isolation wing has four mare-and-foal stalls, and six regular stalls, each with its own antechamber. The mare-and-foal stalls are specially designed to permit safe separation of mares and foals if necessary, greatly improving the



level of patient care. Two of the four mare-and-foal stalls in the Center's isolation wing are equipped with ceiling-supported motorized hoists, as is one of the mare-and-foal stalls in the colic wing, which will allow sling support for compromised patients when needed; another important benefit not available in the current isolation building.

MORAN CENTER HIGHLIGHTS AND SCHEDULED TOURS

This state-of-the-art critical care center sets the bar for other equine care centers in the nation. With advanced equipment, utilities and infrastructure designed to meet the standards of 21st century equine veterinary medicine, the Moran Center ensures the first-class care and level of excellence to which NBC clients are accustomed. Some of the highlights of this facility include:

- Two wings – an isolation wing and a colic wing
- 12 regular colic stalls plus two mare-and-foal stalls
- Four mare-and-foal stalls in the isolation wing and six regular stalls, each with its own antechamber
- Self-contained stalls with individual outside access
- Environmentally controlled air circulation that flows from the center of the facility outwards
- Individual stall antechambers for storage and dedicated patient supplies
- Plexiglas windows on the walls of the antechamber and stall for observation
- Cameras in each stall that provide remote observation capabilities for nurses and veterinarians. Each mare and foal stall includes two cameras for complete coverage area
- Specialized software system that allows remote observation access for off-site veterinarians
- Procedure rooms in each wing with dedicated storage space and a fluid storage area
- Changing rooms, nurses' stations, pharmacies, laundry and cleaning areas in each wing

Interested in seeing the final product first-hand? A limited number of tours will be given to the public on Saturday, June 5. Please reserve your place by calling Patricia Hall, development coordinator for New Bolton Center, at 610.925.6181 or email her at phall@vet.upenn.edu.

and this particular gift helped launch a new era of specialized, sophisticated health care delivery for the horse.

A special dedication is planned for the first week in June, when these visionary donors and legislators will see for themselves the invaluable addition to advanced veterinary services now available at one of the mid-Atlantic region's premier equine clinics.

"We are all anxious for the building's opening," said Dr. Aceto. "It is satisfying to see six years of hard work and diligent and tenacious planning come to fruition. The opening of the Moran Critical Care facility is truly a turning point – for both Penn Vet as well as for equine care throughout the nation." ■

Dr. Helen Aceto, Dr. Ray Sweeney and Jane Simone contributed to this story.

Architects: Paul Steege & Associates
Engineers: Precis Engineering, Inc.
General Contractor: Bancroft Construction Company

*JAVMA, Vol. 233, No. 5, September 1, 2008 pp. 767-773

Because of the need to maintain a clean environment, both the isolation and colic wings of the Moran Center have changing rooms and nurses' stations. The changing rooms include toilet and shower facilities. Both wings also have their own pharmacies in addition to laundry and cleaning rooms. Hay and straw sufficient for each day are stored in a special enclosed area at the end of each wing and both have an area dedicated to the storage of specialty feeds adjacent to each nurses' station. In addition to changing rooms, in the common area of the Center there is a staff lounge and a conference room. Provision of personnel facilities is designed to provide an optimum working environment for the individuals involved in the care of cases that are amongst the most critical, and to minimize personnel traffic between the Center and the rest of the hospital.

Construction materials for the Center were critically evaluated to provide maximum clean-ability, environmental safety and efficient operation. Solid, non-porous, highly durable surface materials were selected along with proper sealing agents for block walls. Even the door handles on the stall doors were carefully selected for safety, security and ability to be disinfected.

The Personnel

As important to maximum effectiveness as the building's careful design is thorough biosecurity training of staff. In the survey paper referred to previously, only 16 of the 38 hospitals surveyed require staff to complete a biosecurity training program, somewhat less than half the hospitals surveyed. Not only are New Bolton Center staff rigorously trained in biosecurity protocols, all sectors of the hospital (from barn crews to faculty) are represented on, and contribute to, the workings of the hospital Biosecurity Committee. Dr. Aceto describes current procedures for teaching students. "Students must attend several lectures that focus on biosecurity and organisms that are important causes of hospital-acquired infections," she said. "In addition, they receive biosecurity orientations both here (New Bolton) and at the small animal hospital in Philadelphia. Overall, the need for attention to infection control throughout the hospital and during the conduct of all procedures, not just in surgery where it has always been emphasized, has been stressed and is absolutely part of our culture."

The entire staff of New Bolton looks forward to the opening of the James M. Moran, Jr. Critical Care Center as a way to offer improved care to their patients. The building was a huge undertaking but is an impressive manifestation of the vision inherent in the support given to Penn Vet by the Commonwealth of Pennsylvania and its understanding of the need to provide outstanding health care facilities to a key component of its vital agriculture industry. The building is named for Mrs. J. Maxwell Moran's (Betty Moran) late son, James. Mrs. Moran with characteristic generosity and foresight made a magnificent gift to close the gap between what the State had pledged, what had come in from other donors and what was needed for the building's construction. Her support to New Bolton Center and Penn Vet over the years is legendary



events

Recent Penn Vet events included (clockwise from top) the 2010 Pennsylvania Farm Show where staff, faculty and students spent time in Harrisburg providing information about the services Penn Vet provides the State in food safety and public health; the annual White Coat Ceremony, in which students move from their classroom training to their clinical rotations; the SCAVMA auction, which funds student travel grants for veterinary conferences and externships, as well as special speakers and events for the student body; the Rush Shippen Huidekoper Dinner, an annual donor appreciation dinner named for the first dean of the veterinary school; and a free pet vaccination and wellness clinic for the West Philadelphia community, held on Martin Luther King Day.





events





contagiouspets

BY KELLY STRATTON

Being aware of zoonotic diseases – those that can be passed from animal to owner – is the first step in staying healthy

The World Health Organization (WHO) defines “zoonoses” as “a group of infectious diseases that are naturally transmitted between vertebrate animals and humans.” More than 200 such diseases have been confirmed notes WHO’s site, www.who.int/en/, and are caused by a variety of agents, including bacteria, parasites and viruses.

It’s true – your attention-seeking, ball-fetching best friend can give you more than wet kisses. He can also infect you with these not-so-pretty bacteria, viruses and parasites. But, with a little common sense and good hygiene, you can protect yourself from contracting a zoonotic disease that your cat or dog has dragged in. Here, we’ll take a look at a few of these potential dangers and how to keep you and your family free from infection.

Rabies

What is it? A viral infection of the brain and spinal cord.

How is it transmitted? Most commonly, through the bite of a rabid animal, but scratches, open wounds or mucous membranes that have had contact with the rabid animal’s saliva or other infectious material can be portals for the disease.

“We live in a big endemic area for the rabies virus,” said Dr. Charles Vite, assistant professor, Section of Neurology and Neurosurgery, Department of Clinical Studies. “Our number one threat is probably the outdoor, unvaccinated cat. If they’re exhibiting signs of rabies, such as paralysis of their hind legs, a person will think, ‘Poor cute little kitty. I’ve got to take care of him and make him better.’ And these are potentially dangerous cats to humans.”

“Most people know not to interact with a raccoon that’s acting strangely,” said Dr. Michael Moyer, director, Shelter Animal Medicine Program, “but they will pick up cats and dogs that look sick so they can help them.”

What it looks like: “The images we see as the ‘classic rabid dog’ – foaming at the mouth, angry – are more understandable for us than the signs we don’t know about,” said Dr. Vite. “A rabid animal may show up with a jaw that hangs open; however,

it may also be a sign of a curable neurological or even a disorder of the jaw.”

Abnormally acting wildlife is also something to watch out for. “Raccoons and skunks may be more people-oriented when they’re infected,” said Dr. Vite.

Why do we need to know about it? In 2006, there were 505 laboratory-confirmed rabid animals in Pennsylvania. Of those, 61 were found in Bucks, Montgomery and Chester counties.

For pets, rabies can be deadly. “If your pet is bitten, but it has been vaccinated, there’s little chance that the pet has contracted the disease,” said Dr. Vite. He also says that if a pet hasn’t been vaccinated and is exposed to rabies, it will likely die.

Rabies can also be deadly for people. The CDC recommends that people who are bitten by a rabid or believed-to-be-infected animal seek out medical help.

Euthanasia or quarantine is recommended for animals with no rabies vaccination history that have been exposed. If a domestic animal bites or scratches a person but the animal is not exhibiting signs of rabies, that animal is quarantined for 10 days to determine whether signs of rabies develop. If, during that period, the animal dies, it is submitted for testing.

“Rabies is the only disease that veterinarians are not geared toward treating,” said Dr. Vite. “It’s a legal and public health issue; not a make-it-better situation. We isolate. Public health takes precedence.”

An ounce of prevention: Get your pet vaccinated. Don’t approach animals acting strangely. “Rabbits and guinea pigs can get rabies, too,” said Dr. Margaret Fordham, lecturer, Special Species Medicine and Surgery, “so it’s best to keep those pets inside.”

Toxocara

What is it? A parasitic roundworm in the small intestines of dogs (*Toxocara canis*) and cats (*Toxocara cati*).

How is it transmitted? “*Toxocara* is a parasite commonly found in puppies,” said Dr. Thomas Nolan, head, Diagnostic

Parasitology. “Older dogs have lower burdens. Puppies get them from the mother while still a fetus and close to 100 percent of puppies are infected at birth.”

While puppies tend to be the main carrier, humans pick up the parasite from the environment – not their canine companions. Puppies get the larvae from their mothers; the larvae mature in puppies’ intestines; the worms produce eggs, which are excreted in the infected animal’s stool. It’s after the human ingests the eggs from soil or contaminated surfaces (which hatch into infective larvae) that he/she becomes infected.

What it looks like: Symptoms in humans may be produced by the presence of the larval worms migrating to different parts of the body. *Toxocara* infections can cause Visceral larval migrans (VLM), which causes swelling in the organs and/or central nervous system; Ocular larva migrans (OLM), an eye disease that may cause inflammation and scar the retina; Covert toxocarosis, which produces mild symptoms like fever, gut pains, lethargy and weakness; and Asymptomatic toxocarosis.

Why do we need to know about it? “Infectious eggs can live in the soil for two years and they’re sticky,” said Dr. Nolan, “so at dog parks a dog can pick them up easily and carry them on his fur. Or, if a child is playing in the dirt, he or she can pick them up from the soil.”

Young puppies that haven’t been de-wormed may die from *Toxocara*. Dr. Nolan advises puppies be wormed every two weeks, beginning at two weeks of age until 12 weeks.

An ounce of prevention: Clean your pet’s living area, pick up after him and administer a heartworm medication as prescribed. Wash vegetables, wash hands and teach children not to eat dirt. New puppies should be bathed and taken to the vet.

Leptospira

What is it? A spiral-shaped bacterium.

How is it transmitted? Spread through the urine of an infected animal, *Leptospira* leeches into water and soil where it can survive for months. If, during that time, humans or animals come in to contact with the contaminated source, they can become infected. Mucous membranes are the portals through which the bacteria can enter; drinking contaminated water can also cause infection.

What it looks like: In pets, signs vary and are nonspecific, though fever, vomiting, diarrhea and refusal to eat are signs reported in dogs. In people, symptoms are often like the flu, but leptospirosis can develop into a more severe, life-threatening illness with infections in the kidney, liver, brain, lungs and heart.

Why do we need to know about it? Leptospirosis can be a serious bacterial infection for both animals and people but it is treatable. If you suspect that your animal is infected, call your veterinarian. She will test for *Leptospira* antibodies and determine the best treatment. Early detection increases the chance for a quick recovery and minimal organ damage.

An ounce of prevention: Getting your pet vaccinated and keeping rodent issues at bay can protect your animal.

Note, however, that the vaccination does not provide 100 percent protection because there are many strains of *Leptospira*.

Wash your hands frequently throughout the day, especially after handling your pet.

The bottom line

According to the CDC’s “Healthy Pets Healthy People” site (www.cdc.gov/healthypets/), “it is important to know that you are more likely to get some of these germs from contaminated food or water than from your pet or another animal you encounter.”

That’s not to say you can slack on regular hand-washing and other precautionary steps.

“If you have young children, older members in your family or someone who is immune-compromised, you should be especially careful,” said Dr. Fordham. “General guidelines are to promote hand-washing, parental supervision when children are playing with their animals or outside and keeping animals’ cages clean.”

“In contrast to veterinarians, MDs don’t necessarily see a lot of these diseases and might not have been trained very well to recognize them,” said Dr. Dieter Schifferli, associate professor of Microbiology. “If pet owners are made aware of zoonoses, they will be able to communicate this information to their family doctors when appropriate.”

What about Lyme Disease?

Lyme disease has become a common summertime concern in certain parts of the US, including southeastern Pennsylvania. It is considered a vector-borne disease rather than a zoonotic disease because humans do not contract the bacterium directly from canine companions. Instead, it’s usually outdoor activities that expose owners to ticks that carry the organism.

“In this area, it’s the black-legged tick – the deer tick – that carries the disease,” said Dr. Meryl Littman, associate professor, Medicine. “It’s important, during the warmer months and into fall, that dog owners regularly check their pets and themselves for these ticks.”

If you find a tick, remove it. “People think to grab tweezers, but there are even better spoon-shaped plastic tick-remover tools available,” said Dr. Littman. “Scoop the tick up and out in one motion and don’t handle the tick with bare hands; wear plastic gloves.”

While most dogs don’t have symptoms of the disease after they’ve been bitten, some may develop a limp or experience kidney issues. Treatment of asymptomatic Lyme-positive dogs is not necessarily warranted since 90 to 95 percent of the time these dogs don’t get sick with Lyme disease.

Regular use of products that prevent the tick’s attachment to your family pet help prevent the disease as well as many other more serious tick-borne diseases.

In people, Lyme disease can cause arthritis, fever, headache, fatigue, cardiac and neurologic problems. “If a person finds an engorged tick on themselves, they should ask their physician for one dose of Doxycycline. If taken within 72 hours of tick removal, they usually don’t get Lyme disease,” said Dr. Littman.

For more information on Lyme disease, visit <http://www.cdc.gov/ncidod/dvbid/lyme/>.



K9 Diablo in the Fight for His Life

BY KELLY STRATTON

““We were on fire,” said Officer Chris Sarnecky from the New Castle County, Delaware Police K9 unit. Sarnecky, a

seasoned street officer, had been teamed up with Diablo – his first K9 companion – in March 2009. The duo graduated in August and were off to a strong start.

But in the early morning hours of November 11 the now two-year-old Belgian Malinois had to be rushed to the Matthew J. Ryan Veterinary Hospital after he’d been shot – in his chest and left hind leg – in the line of duty.

“I didn’t know to what extent he’d been hurt,” said Sarnecky, “but from what I could see, his leg was blown apart.”

Their first stop was at Wyncrest Animal Hospital in Wilmington, DE. Doctors’ X-rays confirmed that the dog’s leg had been shattered. “At that point they said they didn’t know if we’d be able to save his leg and suggested we go to Penn,” said Sarnecky.

A police caravan escorted Diablo to Philadelphia. “I crawled into the kennel with him to hold him on the drive. That helped keep him – and me – calm,” said Sarnecky.

Upon arrival at Ryan Hospital, the Emergency Service team went to work checking Diablo’s vitals and stabilizing him. “They told me he was gonna live but that he might lose his leg,” said Sarnecky. At 6:00 a.m. Sarnecky headed to headquarters to complete paperwork. “They told me to go home, take a nap, relax, but I couldn’t. I felt weird leaving him. I knew he was in good hands, but it felt strange.”

It must have felt strange for Diablo, too.

“When we first saw him, you could not touch this dog,” said Dr. Elaine Holmes, resident, Matthew J. Ryan Veterinary Hospital. “He was feeling compromised, he didn’t trust us and every once in a while he would bear his teeth,” she said. “When I first saw him, Emergency Service had sedated him, started him on antibiotics, pain medications and fluids right away. We set him up in ICU so he was stabilized before we went in for surgery on his leg.”

That afternoon, Sarnecky got a call from Dr. Holmes. Diablo had gotten through surgery and it had gone well.

“He’s a Hard-Headed Nut”

While the surgery itself was a success, Diablo was showing signs of aspiration pneumonia, an inflammation in the lungs that occurs when foreign matter like vomit or blood is breathed in and travels into the lungs.

Diablo’s respiratory recovery depended on the expertise and attention of the ICU team.

“Pre- and post-operative care is essential to a surgical patient’s outcome. End of story,” said Dr. Elise Mittleman Boller, a staff veterinarian in the ICU. “And in Diablo’s case, ICU care was absolutely critical. Every single person in ICU had a role in that dog’s care.”

“He was a trauma victim,” said Dr. Holmes. “His overall systemic health was compromised and that made him more susceptible to complications and he was having difficulty handling the anesthesia. The pneumonia was our biggest close call.”

“Pneumonia was the big issue,” said Sarnecky, who, throughout the length of Diablo’s stay, spoke to Dr. Holmes two-to-three times each day. “Dr. Holmes was up-front; she didn’t sugar-coat anything, which is what I asked for. She called me every morning to tell me how Diablo did through the night. And she told me at the beginning that he may get pneumonia after his surgery and he did. He went down hill.”

Dr. Holmes and Sarnecky talked about how to proceed and came up with three options: 1) Do nothing and see how and if Diablo progressed; 2) Give him meds to dry out his lungs; or 3) Put him on a ventilator that would breathe for him. They decided on the ventilator, but with specific parameters.

“We said that if he’s on the ventilator for 24 hours and he’s worse, we’re going to end it,” said Sarnecky. “If in 48 hours he’d improved, we’d continue and by 72 hours we’d know if he was going to pull through.”

The first night the dog did well, but throughout the day, progress faltered. On the second night, doctors gave Diablo a breathing challenge as his oxygen levels had once again progressed. Clinicians turned the ventilator down, but the dog couldn’t breathe on his own.

“The days I felt most defeated were the days that the pneumonia took a turn in a negative way,” Dr. Holmes said.

Right: Dr. Holmes shows Officer Sarnecky and his wife the progress Diablo's lungs have made. Below: Diablo visits Ryan Hospital — with stuffed toy in mouth and in good spirits — for a bandage change weeks after his December release from ICU.



Sarnecky and his colleagues visited Diablo while he was on the ventilator. “One day he’s walking around, recovering from the surgery and then to see him laying there motionless...everybody in the room was teary-eyed. That was the first time you said, ‘Oh, he looks bad’ and wondered if he was going to pull through,” said Sarnecky.

At the end of the 72 hours, Sarnecky made another trip to ICU. “Based on how he looked the last time I’d seen him, I was fully expecting to have to make the decision to take him off the ventilator. But by the time we’d made our drive, the doctors had taken him off the ventilator and he had been pretty much breathing on his own. It was unreal. Phenomenal,” said Sarnecky. “Less than 20 percent of dogs make it off the ventilator, let alone go home. But he beat it. He’s a hard-headed nut. It’s like he needed those 72 hours to reset himself, relax, shut down and recover.”

Gaining Ground

After he was off the ventilator, doctors collaborated to find ways to sedate Diablo since he had to be anesthetized to have his leg bandages changed and to have doctors and nurses manipulate his leg.

“He did not like having his feet touched,” said Dr. Holmes. She consulted with Sarnecky and Dr. Paula Larenza, assistant professor/clinical educator and anesthesiologist. “We needed a creative way to sedate and anesthetize him. I knew Dr. Larenza would have a couple of ideas on how to do that.”

“Diablo was considered a high-risk patient for anesthesia because he was already compromised,” said Dr. Larenza. “He’d lost so much blood, his cardiovascular function was unstable, so Dr. Holmes didn’t want to put him under general anesthesia again because of how badly he’d tolerated it.”

The team administered epidural blocks that numbed Diablo from the waist down and allowed them to change the bandage, but they also administered a new technique using radiology.

“We locate the exact nerves we want to numb by using ultrasound,” said Dr. Larenza. “It’s more non-invasive. The patient receives mild sedation and then, using ultrasound, a local anesthetic is administered to the precise location of the nerves that need to be blocked.”

Diablo’s bandage change was the first time this method of administering local anesthesia was used at Ryan Hospital in a sedated/awake patient.

Homeward Bound

After a 21-day stay in the ICU, Diablo was ready to go home.

“Diablo was in my garage before the shooting,” said Sarnecky. “My goal was to get him to work, get him into a routine and then get him into the house.”

But those plans changed. Now, because Diablo is on bed rest, he’s housed in a crate in the Sarneckys’ den. “Most of the time he’s in the crate or laying on the floor with me,” said Sarnecky. “If he had his way, he’d be running around all day but he isn’t allowed. He’s dealing with it better than I expected, but he still has his drive.”

Diablo continues to make progress. “We’re moving in the right direction,” said Dr. Holmes. “He’s getting some bone growth in his leg and he’s doing well.”

“My hope,” said Sarnecky, “is that he’ll be able to come back to work. The potential for this dog is amazing and I love working with him. But, if it turns out he’s not able to work, that’s okay, too. He’s paid his debt and he’ll stay a part of my family.”

Burned Horse's Spirit Not Broken

BY KELLY STRATTON

In looking back, Frances (Fran) Wade-Whittaker gets emotional.

"I cried every day for a month," said Fran about her handsome Oldenburg mare Suki, who, nine months ago was the victim of a barn fire. "I cried just thinking of what she must have gone through that night. It's heart-wrenching."

On July 10, 2009, a fire broke out in a boarding facility in Oley Township, PA. Although the horses in the barn were set free, Suki was spooked and ran back into the burning barn. Fire fighters got the horse out a second time and she took off with another horse. "The fire fighters couldn't find them. There was nothing I could do; I just paced all night," said Fran.

Measuring about 17 hands high and weighing approximately 1,460 pounds, Suki was found in a nearby pasture, badly burned. After consultation with Fran's local veterinarian, Suki was loaded up and taken to New Bolton Center's George D. Widener Hospital for Large Animals where the horse was seen by Dr. Kelly Kalf.

"Between 65 to 70 percent of her body was burned," said Dr. Kalf. "There was severe eschar and scabs from the burn along her back and her ears were stiff and blackened."

In addition to the eschar on her back and her burned ears, Suki's facial hair was gone, her eyes swollen shut, her head was hanging low and she had a rapid heart rate; she was in shock. The Emergency Services team tended to her and set her up in ICU where she received IV fluids, pain medication, antibiotics, anti-inflammatory medicine and topical ointments.

As soon as she could, Fran traveled to New Bolton Center. "In my initial meeting with Dr. Kalf I said, 'If she needs to be put down, tell me that.' And she said, 'No, no, no. We're going to give this a shot.' But I knew that the first 48 to 72 hours were going to be crucial."

"We didn't dissect the burn to determine the degree – whether they were first-, second- or third-degree – like they normally do right away in human medicine," said Dr. Kalf, "because we wanted to get her stabilized and keep any protective layers of skin in place."

Aside from the burns, the most alarming symptom to Dr. Kalf was Suki's developing nasal and head edema (swelling). One of the biggest immediate concerns was how much smoke and soot inhalation damage there was – and whether or not Suki would require a tracheotomy or develop life-threatening pulmonary edema or pneumonia.

Another concern was her eyes, which were swollen shut. She had corneal ulcers in both due to thermal injury, which resolved with treatment. "Even after the ulcers healed, we were worried that her corneas might not be getting the lubrication they needed, but, once the swelling subsided a bit, she was able to open and close her eyelids normally, which provided enough lubrication to the corneas with the tear film," said Dr. Kalf. By the time she was discharged, Suki was able to open and close her eyes normally.

"After the first 48 to 72 hours, when she'd lifted her head and was eating, she never looked back," said Dr. Kalf, "and her attitude was good and strong."

Despite living more than an hour away, Fran visited Suki four days a week. "I needed for her to know I was



Fran and Suki, three months after Suki's saddle-breaking at three years of age.



Three weeks after the barn fire, Suki's skin begins to slough off and needs constant care.

there,” she said. “Each day, she was doing better. The first time I saw her, her eyes were swollen shut. The second day, they’d already started to open. And through it all, she was always Suki, the diva, being a little pushy and prissy.”

Apples, Molasses and Gummy Bears

An integral component of Suki’s treatment was the care she received in ICU. Because of the severity of her burns on her head, face and neck, Suki couldn’t wear a halter and administering oral medication was challenging.

“The ICU was a good location for Suki because there’s round-the-clock care,” said Dr. Kalf. “The nurses and residents are on top of the cases more than anyone else and can say, ‘This changed in the last hour. This changed over night. She’s not responding to this.’ And they knew exactly how to administer drugs since Suki’s head couldn’t be touched and she couldn’t wear a halter.”

The team used apples, molasses and gummy bears to administer Suki’s medications.

Slowly, Suki’s burned skin began to slough off revealing new hair growth, indicating her burns were first- and second-degree. Throughout her stay at Widener Hospital, Suki’s wounds were treated topically and Dr. Kalf regularly conducted wound debridements, a process by which dead, damaged or infected skin or tissues are removed in order to promote new growth.

“The doctors and nurses were so amazing,” said Fran. “They went above and beyond, they were kind, attentive and that felt good. I knew she was getting the best care.”

After 47 days at Widener Hospital, the horse had made enough progress to be released to the lay-up facility where she continues to heal.

“I Feel Pretty”

While Kelly Buss had worked with recovering horses before, she’d never met a horse like Suki. Suki was high-maintenance, requiring early-morning, late-evening and all-day attendance. Kelly’s barn is where Suki continues her recovery after release from Widener Hospital.

“I’ve seen a lot of gorgeous sunrises thanks to Suki,” said Kelly. Because Suki could not be out in the sun, Kelly would administer the horse’s early morning medications, let her outside until sunrise and then bring her back in for the duration of the day. “I’d let her back outside when the sun would just pass the barn. She loves being out there.”

Only 15 minutes away, Fran visits often. “Kelly has really done more for Suki than I could have ever asked,” said Fran.

“I kept a log of what I did so that Fran could be sure we were getting done what we needed to,” said Kelly. “But, what started out as a list of when I gave medicine, fed her, let her outside, became more of a journal.”

Kelly pulls out the log. From simply jotting down the duties of the day, Kelly has gotten more descriptive. From writing about sunrises to reflecting on how Suki must feel and singing her songs like “I Feel Pretty,” Suki has had an influence on her caretaker.

“She’s just such a special horse,” said Kelly. “She’s so graceful. She’s been through something you don’t ever dream of and she has still maintained the sassiness that Fran talks about. It’s just amazing.”

Suki’s daily care has steadily lessened in intensity. While it’s still uncertain whether she’ll be able to be ridden again doesn’t much matter to Fran. “She’s still my Suki. My diva, sassy Suki.” 🍷



Dr. Bill Gilsenan, resident, Dr. Kelly Kalf and Dr. Joan Norton, resident, say their goodbyes on Suki’s day of discharge from Widener Hospital.



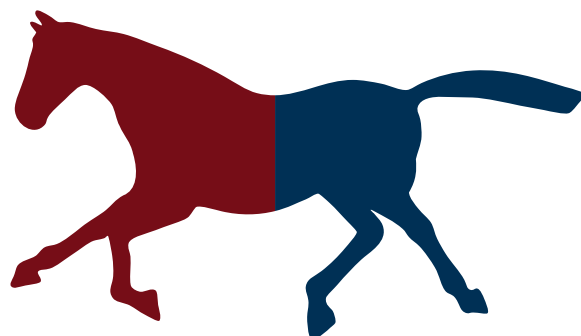
Fran visits Suki at Kelly’s layup facility in Fleetwood, PA as the horse continues her recovery.

Penn Vet Stays Ahead of the Spread of Disease, Safeguards the Food Supply and Enhances Economic Development

BY SUSAN MILLER

Public health and economic development are critical to quality of life in any century. Penn Vet's robust research agenda and programs for assessment and control keep us on the front lines of prevention, while our research and superb clinical care help to prevent disease from starting and spreading.

Among the five funding priorities of *Making History: The Campaign for Penn Vet* is "Investing in Care and Research." As such, capital projects on both the Philadelphia and New Bolton Center campuses make up the largest single priority area. And from experience, we



Campaign

- \$79.90 million raised to date
- \$70.10 million to \$150 million goal

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know that funding "bricks and mortar" can be the most difficult dollars to raise.

As you read through this edition of *Bellwether*, you will have a better understanding of the importance of research and care related to infectious disease and the critical role veterinary medicine and veterinarians play in safeguarding human health as well as animal health. The James M. Moran, Jr. Critical Care Center was built specifically for this purpose.

We are truly grateful to Mrs. J. Maxwell Moran (Betty Moran) for her investment in excellence in the endless fight against infection. Her vision, leadership and support through her naming gift will allow Penn Vet to raise the standard of care for critically ill animal patients and the dynamic evolution of veterinary medicine at New Bolton Center. ♥

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Ms. Gail Petty Riepe

BY JANE SIMONE

Gail Riepe has a long and distinguished relationship with the University of Pennsylvania, both as a graduate (CW'68) and as the wife of recently retired Trustee Chair James S. Riepe (W'65, WG'67).

The Riepes' dedication to Penn is legendary, but until recent years was driven largely by Jim's involvement, with Gail playing a strongly supportive role. Such was the satisfaction they derived from this involvement that Gail felt more and more that she would like to have a role at Penn that was uniquely hers. She found it through her love of animals and her particular passion for horses. The logical place for her to direct her energies was Penn's School of Veterinary Medicine.

Gail joined the School's Equine Advisory Committee and in 2003 toured New Bolton Center in one of the antique carriages from its carriage-driving program. Her personal friendships among the local equine community brought her back for both Vet School business and pleasure, getting to know faculty and staff through her committee work and the fun of a frosty but sunny carriage drive at the Pennsylvania Hunt Cup. In March, 2004, she accepted Dean Kelly's invitation to join the Board of Overseers and has served loyally and enthusiastically ever since.


“ In her role as a Penn Vet Overseer, Gail has seen the unveiling of New Bolton Center's master plan for the refurbishment and expansion of the critically important George D. Widener Hospital for Large Animals. ”

At her lovely, historic home in Cockeysville, MD, Gail oversees the wellbeing of her beloved dogs, horses and chickens. Her primary equine care veterinarian, Cooper Williams, V'85, is another strong link to Penn Vet. Gail is actively involved in the care of the Riepe menagerie and is particularly interested in homeopathic and natural remedies.

In her role as a Penn Vet Overseer, Gail has seen the unveiling of New Bolton Center's master plan for the



refurbishment and expansion of the critically important George D. Widener Hospital for Large Animals. This venerable facility, that has pioneered so many revolutionary diagnostic, surgical and care modalities for equine and large animal veterinary medicine, is now more than 45 years old. Advances in every aspect of veterinary care has made its space both inadequate and obsolete and if the hospital is to meet the needs of Pennsylvania's vital agriculture industry – a large part of which is the State's burgeoning equine industry – it must have infrastructure that is capable of the latest in biosecurity, technology and patient care delivery.

Gail knows and understands how important a state-of-the-art surgery suite is to the Widener Hospital, its exceptionally skilled and talented clinicians, its patients and its students. She has made an outstanding leadership gift to the project of \$1 million, and has vowed to help raise the remaining \$16 million for a fully equipped, 21st century equine surgical suite that will be second-to-none. Her generosity continues a well-established tradition in the Riepe family of seeing a need and responding in a way that is transformational. If you'd like to join Gail in this key endeavor for Penn Vet's New Bolton Center, please contact Jane Simone at 610-925-6500 or jsimone@vet.upenn.edu. 



Looking for the opportunity to learn more about Veterinary Medicine?

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VETS

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@ THE UNIVERSITY OF PENNSYLVANIA SCHOOL OF VETERINARY MEDICINE

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Week long day sessions have been created for both college/post bac students and high school junior and seniors.

College/Post Bac

May 24-28, 2010
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High School (Juniors and Seniors)

July 12-16, 2010, August 2-6, 2010
& August 9-13, 2010

For more information or to download and application, visit www.vet.upenn.edu and follow the Education and Training tab to Student Admissions where you will find the **VETS** page. You may also contact us at summervets@vet.upenn.edu.



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Dr. Gregory C. Griffeth, DVM, DACVD

Name: Dr. Gregory C. Griffeth

Birthplace: Athens, Georgia

Position: Staff Dermatologist, Matthew J. Ryan Veterinary Hospital

Research interests: *Staphylococcus* and *Pseudomonas* infections, novel antimicrobial therapy in small animals

Beginnings: Owning a menagerie of animals all your life has its effects. It was through that ownership that Dr. Griffeth, a native of Athens, GA, first became interested in pursuing the field of veterinary medicine as a career.

Before entering veterinary school, Dr. Griffeth was a graduate student in molecular biology and immunology. And it was during his clinical rotations in vet school that he was particularly drawn to dermatology and allergy. Post-doctoral studies continued for Dr. Griffeth at the University of Tennessee College of Veterinary Medicine's Teaching Hospital, as well as at Penn Veterinary Medicine's Matthew J. Ryan Veterinary Hospital. He was then appointed a staff veterinarian at Ryan Hospital.

"Allergies often manifest as skin and ear problems in dogs, cats and horses," he said. "As a result, dermatologists have become the de facto allergists and otologists in veterinary medicine. Chronically itchy ears are an especially pervasive problem in dogs, and effective treatment requires more time and equipment than most general practitioners have. One of my goals is to explore the possibility of opening an ear disease center at Penn Vet to address this issue."

Dr. Griffeth takes on clinical cases in addition to teaching dermatology. "At least half of all animals seen in small animal clinics have a dermatology problem," said Dr. Griffeth. "These are often complex problems to diagnose and treat, consuming a great deal of time for the general practitioner. One of our primary goals is to help students become strong diagnosticians."

He emphasizes to his students the importance of looking at the whole situation surrounding the animal they are seeing.

"You have to find a balance between the animal's lifestyle and the owner's lifestyle," says Dr. Griffeth. "In some cases, we see working animals such as police dogs and guide dogs. If a physical condition keeps them from doing their job or presents a risk to their health and their owner's health, that is a major problem and we need to find a solution. At the same time, we don't want

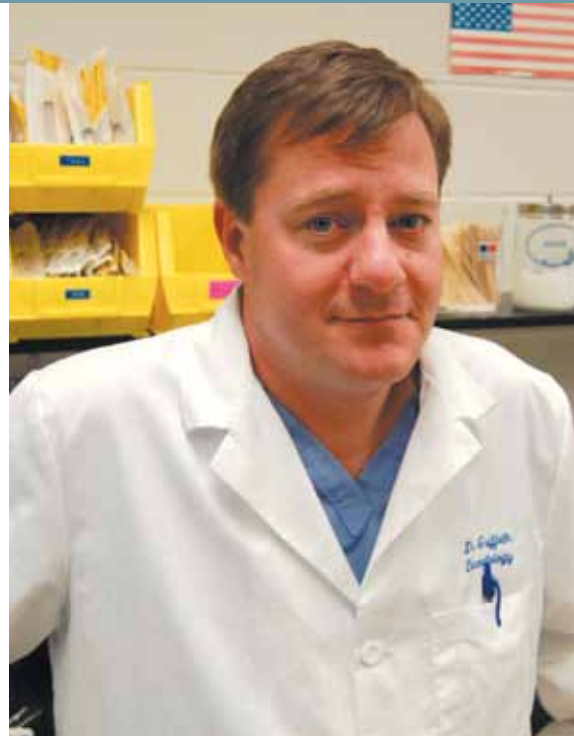


Photo by John Doriges

the treatment to be worse than the disease. I encourage students and residents to find a balanced approach and be wise in their decision making."

Dr. Griffeth enjoys sharing his knowledge with students. "Teaching is an intellectual fountain of youth," he said. "Students are so eager to learn and start treating patients. Their enthusiasm rubs off on me every day."

Life at Penn: 2005-2007: Resident in dermatology and allergy, MJR-VHUP at Penn Vet. 2009: Joined Penn Vet as staff dermatologist and faculty member.

Recent Publications:

Griffeth GC, Morris DO, Abraham JL *et al.* Screening for skin carriage of methicillin-resistant coagulase-positive staphylococci and *Staphylococcus schleiferi* in dogs with healthy and inflamed skin. *Veterinary Dermatology* 19: 142-9, 2008.

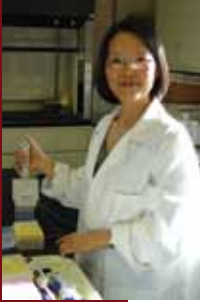
Abraham JL, Morris DO, Griffeth GC *et al.* Surveillance of healthy cats and cats with inflammatory skin disease for colonization of the skin by methicillin-resistant coagulase-positive staphylococci and *Staphylococcus schleiferi* sp. *schleiferi*. *Veterinary Dermatology* 18: 252-9, 2007.

What's next?

Staphylococcal adherence

Pseudomonas biofilms

Novel uses for old and unusual antibiotics



Dr. Zhengxia Dou

Dr. Zhengxia Dou, associate professor, Department of Clinical Studies at New Bolton Center has been awarded a Hewlett Award for Innovation in International Offerings and will be taking a group of students to China in summer 2010 to study agricultural methods in various areas of the country.



Dr. F. Claire Hankenson

Dr. Mark Oyama, associate professor of Cardiology in the Department of Clinical Studies in Philadelphia, has been awarded the Asa Mays, DVM, 2009 Award for Excellence in Canine Health Research by the American Kennel Club – Canine Health Foundation.

Dr. Alexander Reiter, assistant professor in Dentistry and Oral Surgery and head of the Dentistry and Oral Surgery Service, gave presentations at the 18th European Congress of Veterinary Dentistry in Zurich, Switzerland and at the 24th Annual Meeting of the Association of Austrian Small Animal Practitioners in Salzburg, Austria. He also recently presented courses in palate surgery in Halmstad, Sweden and in oral and maxillofacial surgery in Sao Paulo, Brazil.

Dr. John Lewis, assistant professor of Dentistry and Oral Surgery, began his two-year term as President of the American Veterinary Dental Society in November, 2009.

Dr. Colin Harvey, professor of Surgery and Dentistry, has been named chairman of the Executive Committee of the American Board of Veterinary Specialties, the American Veterinary Medical Association entity that accredits veterinary specialty organizations in North America.



Dr. John Lewis

Dr. Alexander Reiter, assistant professor of Dentistry and Oral Surgery and chief, Dentistry and Oral Surgery Service, Ryan Veterinary Hospital and **Dr. John Lewis**, assistant professor of Dentistry and Oral Surgery, gave presentations at the 44th Annual Symposium of the American College of Veterinary Surgeons in Washington, D.C. October 8-10, 2009.

Dr. Gail Smith, director, PennHIP, and PennHIP research fellow **Dr. Georga Karbe** presented the first-ever PennHIP seminar in the UK in Cambridge, England in December, 2009. More than 50 UK veterinarians attended Drs. Smith's and Karbe's seminar.

Charlotte Higgins, CVT, nurse at Matthew J. Ryan Veterinary Hospital, has been named to the organizing committee of the Academy of Veterinary Nutrition Technicians, which will be working to form a new specialty certification in nutrition to be recognized by the National Association of Veterinary Technicians in America.

Drs. James Serpell, director, Center for the Interaction of Animals and Society, and **Cindy Otto**, research director, Section of Critical Care, Department of Clinical Studies in Philadelphia have been awarded a grant to fund their study, "Early Retirement of Guide and Service Dogs."



Dr. Mark Oyama

Dr. Lauren Greene and **Dr. Marc Knobbe** passed their specialty boards and are now Diplomates of the American College of Theriogenologists.

Assistant Professor of Pathobiology, CE and Senior Associate Director of University Laboratory Animal Resources, **Dr. F. Claire Hankenson** was the recipient of the 2009 Pravin N. Bhatt Young Investigator Award presented by the American Association for Laboratory Animal Science. This award recognizes an outstanding young scientist who has made significant contributions to the fields of laboratory animal science or comparative medicine. Her recent work examines the outcome of tail biopsy in mice in terms of the scientific utility of this common practice and the pathologic and clinical sequelae. .

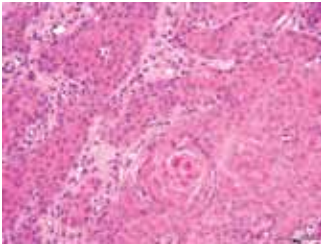


Dr. Gail Smith

Correction: In the Fall 2009 issue of *Bellwether* we made an error in Dr. Erika Krick's appointment. She was appointed to Assistant Professor of Oncology, CE. Apologies for the mistake. ■

Improving treatment options for feline squamous cell carcinoma

Using polyamines and combination therapy to inhibit cell growth



Dr. John Lewis, assistant professor of Dentistry and Oral Surgery, Department of Clinical Studies in Philadelphia and associate director of Mari Lowe Center for Comparative Oncology, first felt the frustration of dealing with

feline oral squamous cell carcinoma (SCC) while on staff at a small animal practice in North Carolina. Although surgery can be curative in some cases, cats rarely show symptoms until the cancer has advanced to an inoperable size. In addition, oral SCC has historically been minimally responsive to radiation therapy and current chemotherapy options. When the opportunity arose, Dr. Lewis jumped at the chance to join a residency program at Penn Vet to further explore surgical and non-surgical options for improving the outcome for SCC patients.

SCC is the most common feline oral tumor, representing 70 percent of feline oral tumors. Since the median survival time from diagnosis to death or euthanasia is approximately 60 days, there is much room for improvement in treatment modalities. Dr. Lewis saw an opportunity to improve treatment options for patients who were not surgical candidates. In conjunction with Dr. Tom O'Brien's group at Lankenau Institute for Medical Research, Dr. Lewis and colleagues in Penn Vet's Oncology Section and Dentistry and Oral Surgery Service embarked on a Phase I/II clinical trial of polyamine inhibitor therapy for cats with spontaneously occurring oral SCC.

Polyamines are ubiquitous amino acid derived compounds that have been widely implicated in the growth and development of many mammalian tissues.

When cellular polyamine synthesis is inhibited, cell growth is stopped or severely retarded. Providing exogenous polyamines restores the growth of cells. Polyamine synthesis is increased in many types of cancers and expression levels of the rate limiting synthetic enzyme, ornithine decarboxylase (ODC), are often increased as well. As Dr. O'Brien's original studies indicated that the ODC inhibitor difluoromethylornithine (DFMO) was effective in treating experimentally induced SCC in mice, a Phase I/II study was carried out to determine whether cats tolerate DFMO. Results of this study will soon be submitted for publication, but the relatively minimal side effects seen with DFMO protocols suggest that further studies are justified for use in a clinical setting.

Although targeting polyamine synthesis with ODC inhibitors can be effective for cancer cell growth inhibition, most eukaryotic cells have a polyamine transport system in their cell membrane that facilitates internalization of extracellular polyamines. Thus, polyamine synthesis inhibitors will only fight half the battle in reducing intracellular polyamine levels. To overcome this limitation, Dr. Lewis' latest study focuses on treating cats affected by oral SCC with a combination therapy utilizing DFMO and a polyamine transport inhibitor developed by MBF Therapeutics. The Veterinary Clinical Investigation Center (VCIC) has greatly facilitated all phases of this second study, and Dr. Lewis further credits the team effort put forth between Dr. Karin Sorenmo, Dr. Erika Krick, Dr. Nicola Mason, members of the Dentistry and Oral Surgery Service, Sections of Radiology and Pathology and practitioners who have shown interest in referring cases. While this study is still ongoing, it is the hope that such combined therapy will halt cancer growth but not significantly diminish other important quality of life aspects.

While increased research on feline oral SCC will undoubtedly benefit feline patients, it is Dr. Lewis' hope that such research will also have important implications for human patients. ■

CALL FOR NOMINATIONS

ALUMNI AWARDS of MERIT

The Executive Board of the Veterinary Medical Alumni Society is seeking nominations for the 2010 Alumni Award of Merit and other awards for distinguished Penn Vet Alumni. Alumni include matriculating graduates, as well as interns, residents and post-doctoral fellows.

To be presented at the Penn Annual Conference in March, 2011, these awards are given to alumni stars who have made outstanding contributions to their profession and to the School, through their contributions that advance knowledge in biomedicine,

promote the welfare of animals through public education of animal owners and benefit society through civic activities that foster the advancement of the profession and the School's good name.

The Veterinary Medical Alumni Society Board is seeking any and all candidates, but specifically from 2010 reunion classes – or classes ending in '5 or '10.

Please forward your anonymous or signed nominations to Coreen M. Haggerty, Director of Alumni Relations, at 215.898.1481 or haggertc@vet.upenn.edu.



CHINA's CLASS

In China, agriculture is a hands-on way of life and acupuncture a common practice, students learn

A full education involves more than textbooks and lectures.

With that ideal in mind, 12 University of Pennsylvania School of Veterinary Medicine students took off on a grand adventure to China under the tutelage of six Penn Vet professors and staff. The visit aimed to give students a real-life tour of Chinese agriculture and a point of comparison to methodology of US agricultural systems.

Upon arrival in China, students traveled to Hangzhou's Zhejiang University. Along the way, the density of the human population of China, as well as the importance of improving the country's agricultural production to meet the growing need for animal protein, was realized. In Hangzhou, students visited farms to evaluate feeding and management systems, attended and presented seminars and toured campus laboratories.

"At their farm visits, students found that cows in China were not unlike those in the US," said Dr. Zhengxia Dou, associate professor of Agricultural Systems, "and that, as in the US, herd size and management styles varied greatly."

Students noted the absence of large tractors and other equipment, the reliance of hand labor and differences in forage harvest strategies, which appeared to compromise forage quality on the Chinese farms.

"In the US, corn silage is harvested quickly at optimum readiness by tractors and other equipment to chop the silage to optimum length and pack it to eliminate oxygen during the fermentation process of silage preservation," said Dr. Bob Munson, staff veterinarian, Center of Animal Health and Productivity.

In China, however, corn forage is purchased from small farms and is delivered green to the dairy where it's chopped and deposited in the trench silo. Silo filling is done by foot. Without the weight of heavy tractors, packing does not allow for optimum fermentation and preservation of forage quality.



Room

Excess moisture, insufficient content of corn grain in the delivered feeds and inconsistent chop length also contribute to silage quality problems. Nevertheless, there are opportunities to improve dairy herd nutrition – and consequently milk production – through improved forage cropping and harvest management.



Students also learned about unique academic programs available, such as research projects at the agricultural school that involve genetic manipulation of silkworms to produce naturally colored silk. In the vet school, students attended demonstrations and received hands-on practice of acupuncture in farm animals from Dr. Songhua Hu.

Next up was a stop in Beijing to China Agricultural University (CAU). At CAU, students attended a lecture by Professor Zhao Deming about veterinary public health issues in China. Evidence of this lecture was felt first-hand; one farm visit was canceled because of concern about foot and mouth disease, and because of concern of Swine Flu, some meetings with Department of Agriculture officials were also canceled.

Highlights of Beijing activities included a visit to a calf-to-slaughter purebred beef raising operation and associated CAU Laboratories for Ruminant Nutrition and Metabolism and Beef Research. This facility is a joint private/academic venture to promote the scientific understanding of beef production. Besides facilities for breed development, growing, finishing, processing and freeze-packing, there is a modern, fully equipped laboratory for applied research and development for the beef industry, complete with taste panel facilities.

“Veterinary medicine involves more than isolated diagnosis and treatment of sick animals,” said Dr. Jim Ferguson, section chief, Nutrition, Animal Health Economics and professor of Clinical Nutrition in the department of Clinical Studies. “And students learned that important lesson on this trip, as well as the lesson that success in the veterinary profession requires understanding of the social and cultural issues important to the clientele whom they hope to serve.” ■

About the Program

In the summer of 2009, students at the University of Pennsylvania School of Veterinary Medicine accompanied six faculty/staff members on a trip to China to visit food animal production facilities as part of their training. The trip was supported by a USDA International Science and Education grant and a Hewlett Award for Innovation in International Offerings. The same award was granted again for summer 2010 where a new group of students will be taken on this educational tour. Further information about the trip can be found at: <http://calpwww.vet.upenn.edu/china/index.html>.

Student Participants

Lauren Aldinger V'12
Katie Brinkley V'11
Hope Coleman V'12
Seth Dunpace V'11
Maho Imanish V'10
Nathan Kapp V'11
Kaitlyn Lutz V'11
Jessica Matjik V'11
Gil Patterson V'11
Laurel Redding V'11
Kate Schulz V'10
Erin Stough V'12

Faculty/Staff Participants

Dr. Zhengxia Dou
(PI, Penn Hewlett Award)
Dr. Jim Ferguson
(PI, USDA grant)
Dr. Dave Galligan
Dr. Bob Munson
Dr. Charlie Ramberg
Dr. Zhiguo Wu

Hosting Chinese Institutions

Zhejiang University
China Agricultural University
Northwest A&F University
Yangzhou University

Into Africa

Penn Vet student Allison Wolosz puts her classroom learning to real-life use in Botswana

BY ALLISON WOLOSZ, V'12



After a whirlwind second semester, my first year of vet school was under my belt. Next up? A trip to Africa.

Within 24 hours after finishing finals, I was en route to Botswana, Africa. Having worked with African animals at Zoo New England in Boston for more than six years before entering vet school, I was thrilled to be making my first trip to the country from which those animals came – and hoping to see some in their real-life environment.

Joining me on my adventure was Lindsay Mendenhall (V'11) plus 12 other students from various schools at Penn. We were all participating in 10-week internships offered by the Botswana-UPenn Partnership, through funding from the Provost's Office.

Upon our arrival, Lindsay and I were put straight to work with several different veterinarians and clinics. Our first stop was the animal clinic at the Botswana College of Agriculture. The clinic was rather slow while we were there – an occasional sick dog or goat would be brought in that we'd help with – but the college had a large collection of animals (goats, sheep, dairy and beef cattle, chickens, pigs, guinea fowl and ostrich) that we tended to. In addition, we worked on some of the ongoing research projects and assisted with surgery.

One such opportunity was to assist in surgery that blocked the facial vein in twin goat kids, a study that had just begun. It aimed to cut off the flow of blood to one of the twin's brains, tricking body temperature sensors and making kids not feel cold. That way, energy would be spent making muscle rather than opting instead to shiver to keep warm. The other twin did not receive the surgery so that comparisons between the twins could be drawn.

Another project at the Botswana College of Agriculture was collecting blood and fecal samples from goats and sheep so samples could be tested to monitor parasite loads. Blood samples from the sheep were also used to make blood agar plates for the microbiology department.

Beef in Botswana is big business. We learned that the northern part of Botswana has foot and mouth disease, a contagious and sometimes fatal viral disease of cloven-hoofed animals. Thanks to strict guidelines regarding movement of cattle and the lack of wild buffalo, however, the disease has been somewhat contained and the southern half of the country remains FMD-free.



Lindsay and I had the opportunity to meet with the vets from the local abattoir and toured the facilities.

We also spent a week working with a vet who works with several of the large feedlots. While there, an outbreak at one of those feedlots occurred, which we later learned was caused by *Pasteurella*, bacteria that can cause respiratory issues. At the feedlot, we assisted in collecting specimens, monitoring and treating cattle. That work is important to the local people as that each cattle that dies is an economic loss for the lot owner as well as to contain the disease from spreading and causing a larger disaster within that feed lot and transmission to others.

And, when we weren't tending to cattle, we were chasing monkeys and baboons out of the pens to ensure disease transmission from baboons and monkeys to cattle was lessened.

At a local private practice we assisted with exams and vaccinations for dogs and the occasional cat. Many of the dogs we saw were treated for diseases that are now uncommon in the US, like parvo, distemper and babesia. In the summer months, the Botswana veterinarians treat numbers of dogs for snake bites, but since we were visiting during the winter months of the African country, we did not see any – though we were able to see scars on some of the survivors that crossed our paths. Many people in Botswana have cats to help keep away pests, but like barn cats, these animals stay outside and rarely receive veterinary care.

The 10 weeks was an enlightening experience. The veterinarians we worked with were accommodating and shared their stories freely with us. Because Botswana does not have a vet school, the veterinarians had different educational experiences – some went to school in Africa, the US, the UK, Australia – and so they all had a different tale to tell. The Botswana people we met were friendly and willing to teach us about the culture and customs in their country, and, despite our busy schedules, we managed to travel on weekends to see some of the amazing wildlife and landscapes the country has to offer – a real treat for me given my background.

In mid-August I returned to the states with stories, photos and memories – and a mild case of ring worm. Given all I learned, all I saw and all I experienced, the ring worm was a small price to pay for the once-in-a-lifetime journey. 🐾



Clockwise from top: An African sunset; Allison on-site at one of her stops; Allison (right) and Lindsay Mendenhall, VMD (left) spent their summers experiencing Africa and its animals, scenery and veterinary practices first-hand; African elephants stopping for a drink.



Gilbert S. Kahn

Gilbert S. Kahn, a long-time member of the School's Board of Overseers, passed away suddenly on February 22 at the age of 81 at his home in Palm Beach, FL.

Mr. Kahn, a member of the Annenberg family, endowed the first deanship in veterinary medicine in 1993 when he established the Gilbert S. Kahn Deanship at Penn's School of Veterinary Medicine. "Gilbert was intensely proud of his distinctive relationship with the School," said Dean Emeritus Alan Kelly, the first incumbent to bear his name. He had a great love of animals and was deeply interested in improving the health of dogs and supported many areas of canine research, particularly neurology.

Mr. Kahn also contributed generously to the Deubler Scholarship Fund and the Josephine Deubler Genetic Disease Testing Laboratory at the School. "Gilbert was such a devoted dog-lover and such an expert breeder that he seemed to embody an entire generation. As with losing Jo Deubler, my personal sadness is compounded by the sense that the dog world has lost a giant," said Dean Joan Hendricks.

A breeder, owner and judge of show dogs, Mr. Kahn exhibited top-winning Shih Tzus that were multi-best in show winners and national specialty winners. Mr. Kahn also exhibited and bred Japanese Chins, Norwich Terriers and Cavalier King Charles Spaniels. He took great pride in the fact that his winning dogs were successful generation after generation and that some of the current winning Shih Tzus trace back to his winning dogs. He had a remarkable, encyclopedic memory of the breeding history of all these animals.

Mr. Kahn was also an AKC-licensed judge for all toy breeds, a number of terrier and non-sporting breeds and Best in Show. He judged at the major dog shows in the United States, among them Westminster.

Gilbert Kahn will be fondly remembered at the School and our Deans will proudly carry his name far into the future.

Peter Widener Wetherill

On Friday, February 19, 2010 the University of Pennsylvania's School of Veterinary Medicine lost a dear friend with the passing of Mr. Peter Widener Wetherill in West Palm Beach, FL.

Mr. Wetherill was a loyal and generous supporter of Penn Veterinary Medicine, especially New Bolton Center. In addition to his support through the American Gold Cup and New Bolton Center's benefit luncheons at Saratoga Race Track, Mr. Wetherill often hosted elegant receptions at his homes in Saratoga and Wellington on behalf of New Bolton Center. He also gave generously to the Hill Pavilion Teaching and Research Building in Philadelphia, and had expressed a keen interest in supporting the expansion of the George D. Widener Hospital for Large Animals at New Bolton Center – the hospital that bears the name of one of his cousins. Mr. Wetherill's belief in the importance of excellent veterinary care for the horse very was well demonstrated through his support of Penn Vet.

Mr. Wetherill was a native Pennsylvanian, a member of one of Philadelphia's pre-eminent families that contributed so much to the development and prosperity of the region. Raised with his brother Cortright Jr. by his parents, Ella Widener Wetherill and Cortright Wetherill, Sr. on Happy Hill Farm in Newtown Square, Mr. Wetherill grew up to be an avid and accomplished horseman and equestrian. He won numerous national championships on such well-remembered horses as *Junior League*, *Desert Storm* and *Hudson*. More recently, his great horse *Cedric*, ridden by Laura Kraut, earned a gold medal in Beijing at the 2008 Olympic Summer Games. Mr. Wetherill also campaigned his wonderful jumper, *Anthem*, a member of the International Nations Cup efforts for decades.

Mr. Wetherill will be remembered by all who knew him as a kind, generous and gentle man who loyally and generously supported the things about which he was passionate. At Penn Veterinary Medicine we recall his quiet, unassuming ways and his wish to help horses and benefit their welfare through the support of veterinary medicine. We will surely miss him and his devoted friendship. 🐾



Making a Difference, Making History...it's easier than you think!

Bequests are one of the easiest ways to support Penn Veterinary Medicine. Bequests have helped shape the character of Penn Vet since it was founded and provide the resources that help support and advance its mission of teaching, healing and research.

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- Removes the value of the gift from your taxable estate.
- When set up as a percentage of your estate, allows for changes in the value of your assets.

Consider including Penn Veterinary Medicine as part of your long-term plans by making a bequest in your will or living trust, or as a retirement plan or life insurance beneficiary designation. By including Penn Veterinary Medicine in your estate plans, you make a contribution that will strengthen the programs in which you invest and leave a lasting legacy.

To learn more about the many ways to support Penn Veterinary Medicine through a legacy gift, contact Lynn Ierardi, JD, Director of Gift Planning at lierardi@dev.upenn.edu or 800.223.8236/215.898.6171.

Setting the Pace:
MAKING HISTORY

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THE CAMPAIGN FOR PENN

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125TH ANNIVERSARY

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Hank Croft, V'78
Owner, Loyalhanna
Veterinary Clinic

Established in 1982, Penn Vet's Memorial Program consists of a large group of practitioners making thoughtful contributions to the Matthew J. Ryan Veterinary Hospital, Pennsylvania's only small animal teaching veterinary hospital, in memory of their clients' pets. The program provides much needed financial support to help fund the treatment and care of Penn Vet's animal patients.

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Rabies in His Blood

*Penn Vet alum **Charles Rupprecht, V'85** has made it his life's work to eradicate rabies – nationally and internationally*

BY COREEN HAGGERTY

*As Chief of the Rabies Program at the Centers for Disease Control in Atlanta and Director of the World Health Organization Collaborating Centre for Reference & Research on Rabies, **Dr. Charles Rupprecht, V'85** oversees programs that monitor laboratory-based surveillance, diagnostics, prevention and control activities of rabies in humans, domestic animals and wildlife. Here's how he found – and pursued – his passion.*

As a youngster, Charles Rupprecht was fascinated with the creek and all the creatures it housed at his grandfather's home. That interest later encouraged his undergraduate study in ecology at Rutgers University and advanced study in zoology and biological sciences at the University of Wisconsin. Charles studied in Wisconsin until it came time to make his next life decision: Would he pursue a veterinary degree or continue his PhD work at UW?

The decision was made easier by **Nancy A. Difalco, GNU'84**, his New Jersey-based girlfriend. Charles had proposed marriage and Nancy had accepted. That meant a move to the east coast for Charles and the pursuit of his VMD.

As a Penn Vet student interested in wildlife, Charles, along with fellow students **F. Joshua Dein V'80 G'83**, **Howard Steinberg, V'84**, began the first Penn Vet Student Chapter of the American Association of Wildlife Veterinarians in 1982.

But Charles' interests were far more expansive. "I would see oddities in the windows at the Wistar Institute. One day I walked in and started talking about bats and rabies," he said. There he met virology researchers Dr. Tadeusz Wiktor, head of the rabies group, and Dr. Hilary Koprowski, director of Wistar. "They wanted someone to look at different rabies viruses found in wildlife – there was no easy way at the time to differentiate rabies and domestic/wildlife variants," said Charles. "And there I was – a naïve vet student."

With this connection to Wistar, Charles' interests merged. "Between the applied clinical focus at Penn Vet and the basic science component at Wistar, it was the perfect scenario to pursue my PhD."

The Road to Rabies

When raccoon rabies entered Pennsylvania, Charles began wildlife vaccination studies of these animals. Soon, a successful recombinant vaccine (a vaccine typically created

by using viruses, bacteria or yeast to express foreign genes) was developed; science was on a path for safe vaccines for wildlife. These vaccines were safer than traditional vaccines, which were made by inactivating or weakening actual disease organisms and injecting into a patient to stimulate the immune system against the disease.

Since those early trials, worldwide work toward rabies elimination has been Charles' lifelong drive. "I see science as a big picture – we have international responsibilities and programs in each country that can serve as examples for another," he said. The World Health Organization has supported one of the biggest efforts, working in Mexico, Peru, Chile and other Latin American countries, making the greatest impact on controlling dog rabies.

In 2006, the Global Alliance for Rabies Control was formed and in September 2007, the first World Rabies Day was held to demonstrate that wildlife rabies is controllable, human rabies is preventable and canine rabies can be eradicated.

As consultant for the Pan American Health Organization, Charles assists governments and world leaders to recognize that dog rabies can be eliminated using humane measures and new techniques. With three current pilot opportunities in the world funded through the Gates Foundation, the model now stretches into Asia and Africa — Tanzania, South Africa and the Philippines. It's this kind of collaboration that is so important to Charles.

"In the 21st century, the United States must serve as public stewards – we must rise to occasion in neighboring nations. We must help drive the One Health concept in resource-poor settings."

Charles hopes that current students rise to the One Health challenge and work to eliminate deadly infectious diseases affecting animals and humans alike, while also pursuing their own childhood curiosities – as he's been so successfully able to do in his own career. ■

"I see science as a big picture – we have international responsibilities and programs in each country that can serve as examples for another."



Photo by Coreen Haggerty



110th Penn Annual Conference Honors Faculty and Alumni

Penn Veterinary Medicine hosted its 110th Penn Annual Conference from March 2 - 5, 2010 at the Sheraton City Center Hotel in Philadelphia, Pennsylvania.

The *VMAS Excellence in Teaching Award*, selected by Penn Vet young alumni and fourth year students, was awarded to **John Lewis, V'97**, Professor of Surgery at Ryan Veterinary Hospital. **Dr. David Holt, BVSc**, Director of Critical Care Surgery, was awarded the inaugural *Charles W. Raker Opportunity Scholarship Award* to recognize a Penn Vet faculty or staff person who fosters mentoring, communication, example and encouragement to students.

The prestigious *Alumni Awards of Merit*, given annually by VMAS to recognize distinguished graduates for their contributions that advance the veterinary profession and the School's good name, were awarded to **Uri Bargai, V'59**; **Dennis Burkett, V'84**; **Laurie Landeau, V'84 WG'84**; **Sheldon Steinberg, V'59, GRM'67**; and **Jeffrey Wortman, V'69**.

VMAS Executive Board Members were elected at the *Annual Meeting*: **Heather Berst, V'00**, **Henry L. Croft, V'78**, **Kristin Dance, V'98**, **Mattie Hendrick, V'78**, **Linda Rhodes, V'78**, and **Robert W. Stewart, Jr., V'99**. Current members are **Susan Emeigh Hart, V'83**; **Susan Jacobson, V'77**; **Eileen Mera, V'86**; **Dominick A. Pulice, V'86**; **William J. Solomon, V'68**; **Brenda Lewis Stewart, V'70**; **Sheldon (Shel) Steinberg, V'59**; **Raymond W. Stock, V'75**; **Jacob (Jake) Werner, V'00**, in addition to VMAS President **Carla Chieffo, V'86 GR'98** and President-Elect, **Peter Herman, V'69**. Active past presidents were also recognized for their continuing service and included **Eric Bregman, V'95**; **Jack Bregman, V'66**; **Michael R. Moyer, V'90**; **Suzanne Smith, V'82**; **James V. Stewart, V'68**; **Robert Stewart, Sr., V'68**; **Marilyn Weber, V'75**; and outgoing board member **Alexandra Wetherill, V'80** was also acknowledged.

Thanks to **Dr. Kathy Michel**, conference advisor, Educational Committee Chairs **Linda Baker, V'84 G'93**, **Meryl Littman, V'75**, **Dr. Rose Nolen-Walston**, **Michelle Traverse**, the entire Penn Annual Conference Educational Committee, and **Darleen Coles** and **Coreen Haggerty**, lead planners. ■



VMAS President, Carla Chieffo V'86 GR'98, and Alumni Award of Merit winner Sheldon Steinberg, V'59 GRM'67.

vmas president's letter

Dear Fellow Alumni,

My first year as President of VMAS has been historically interesting. The state of our economy affects all things, including the success of higher education schools that rely on government funding to sustain, such as our own School of Veterinary Medicine.

The veterinary profession is not unlike any other business in today's economy. But even in an era of cut-backs, there are significant positive changes within our profession – more women are entering veterinary medical careers; more young alumni are pursuing non-traditional careers such as industry and public health; more of the world understands the impact that veterinarians have on our society – socially, economically and environmentally. Penn Vet remains an amazing springboard for us all.

In that regard, it is important for us to get (and stay) involved with our alma mater. Alumni Weekend allows

us to gather together and help each other in our careers and our lives. As times passes, we should be in a position to give back to the School – as a personal thank-you and a professional commitment to the students and future of our profession. We can provide support in so many ways – mentor a student, donate payment for your “side-work” to the School, join in the fun at the SCAVMA auction. Contact the alumni office and ask, “How can I help?”

As President, I am looking for new, novel ways to reach out to all alumni in this next year. Call us and share your ideas.

—CARLA CHIEFFO, V'86 GR'98
PRESIDENT, VETERINARY
MEDICAL ALUMNI SOCIETY

1940s

1945 – Jack Robbins, C’44, V’45 was honored in late 2009 by the National Turf Writers Association with an award. Robbins, a president of Oak Tree and past president of the American Association of Equine Practitioners, will receive the Joe Palmer Award. Named for the former *New York Herald Tribune* Turf writer, the Palmer Award is presented annually for meritorious service to racing.

1970s

1971 – Dr. Gerald Snyder, V’71, publishes *Veterinary Productivity*, a newsletter for practice productivity. He also provides the regular column, “Practice for Profit,” for the *DVM Newsmagazine*.

1972 – In August, 2009 at the 34th World Small Animal Veterinary Association Congress in Sao Paulo, Brazil, **Peter Ihrke, V’72** was named the recipient of the 2009 WSAVA Hill’s Excellence in Veterinary Healthcare Award. The WSAVA is an association of veterinary organizations from all over the world, concerned with small companion animals such as cats, dogs, rabbits and guinea pigs. Currently there are 76 member and affiliate associations, representing more than 70,000 individual veterinarians from around the globe.

1974 – John Simms, V’74 is the first recipient of the George B. Wolff Legislative Leadership Award. Named for PVMA’s long-time lobbyist George Wolff, Dr. Simms received the award for serving as an active member on behalf of the organization and the veterinary professional in the Pennsylvania state legislature.

1979 – Ella S. Boyd, V’79 serves as the Ocean County, NJ Health Department Public Health Coordinator.

1980s

1980 – James F. Dougherty, V’80, VRS’84 has joined the School of Arts and Sciences Dean’s Advisory Council as well as the Rutgers University Board of Overseers. Dr. Dougherty also received his BA and MS from Rutgers University in New Jersey.

1980 – Founder of the Young Horse Program at the School of Environmental and Biological Sciences at Rutgers University, New Brunswick, NJ, **Sarah Ralston, CW’73, V’80, GR’82** has included the handling of mustang yearlings into the program that teaches students about handling, training and nutrition of young horses. Mustangs have more life experience, are less expensive and offer Dr. Ralston the opportunity to explore the nutritional needs as compared to yearling draft horses.

1981 – Published by Bow Tie Press/Kennel Club Books, **Dr. Deva Khalsa’s, V’81**, book *Natural Dog: A Holistic Guide for Healthier Dogs* was released in June of 2009, and within a month was on the pet book best-seller list. It has been rated by professionals as a “10 out of 10.”

1982 – Rose Fiskett, V’82 of Scotland, PA, was elected as vice president and conference chair of the Association of Exotic Mammal Veterinarians at the organization’s business meeting in 2009. The AEMV hosts annual continuing education events in conjunction with the Association of Avian Veterinarians (AAV). This combined conference will be hosted in San Diego in 2010.

1982 – John Wolfe, V’82, GR’86, a Children’s Hospital of Philadelphia Research Institute scientist and a Penn professor of Pathology and Medical Genetics with special expertise in genetic and cellular mechanisms in the brain, will lead a project which focuses on how NK-1R drugs function in human immune cells and brain cells. This project is part of \$6 million, five-year federal grant to The Children’s Hospital of Philadelphia Research Institute to enable researchers to investigate a novel approach in treating HIV infection – a unique class of drugs focused on developing therapies for psychological and neurological effects in AIDS.

1983 – Governor Edward G. Rendell of Pennsylvania appointed **Sherrill Davison, C’79, V’83, G’88, GR’04** to the Governor’s Food Safety Council.

1986 – Donald Sankey, V’86 of Harveys Lake, PA, joined the West Side Veterinary Hospital as an associate veterinarian, after practicing veterinary medicine for 23 years in Wyoming Valley, PA and Southern California.

1989 – Joanna Bassert, V’89 was awarded the Elsevier-AVTE Teaching Excellence Award for her outstanding contributions to the education of veterinary technicians. The award was presented at the 2009 meeting of the Association of Veterinary Technician Educators conference, which was held in Omaha, NE this summer. Dr. Bassert is the co-editor of the *Clinical Textbook for Veterinary Technicians* and co-author of *Clinical Anatomy and Physiology for Veterinary Technicians*. She is also the producer of various CD-ROMs and educational teaching videos and is founder and President of the Northeast Veterinary Technician Educators Association.

1990s

1991 – Michael Dym, V’91 posts a “vet blog” via Pet Meds three to four times weekly to address general pet owner concerns. His commitment and passion for pet health continuously drives him to learn more about the art and science of homeopathy through ongoing training and education.

1991 – Nancy Kate Diehl, V’91 was awarded a Juris Doctorate degree from Concord Law School of Kaplan University. Dr. Diehl is a regulatory veterinarian for the Pennsylvania Horse Racing Commission. She plans to use her law degree in legal research and consulting related to veterinary medicine.

1981 – John Lewis, V’97 has been appointed President of the American Veterinary Dental Society, serving 2009-2011.

1981 – Bonnie S. Barr, V’97, an Internal Medicine specialist at Rood & Riddle Equine Hospital in Lexington, KY, has written an article related to botulism in horses for dressage.com. Dr. Barr has special interests in neonatology and infectious disease. She raises thoroughbreds and quarter horses with her husband.

2000s

2000 – Margaret Mudge, V’00, DACVS, ACVECC, and assistant professor of Veterinary Clinical Sciences at The Ohio State College of Veterinary Medicine presented at the All American Quarter Horse Congress on October 17, 2009 in Ohio on the topic of “So, You Want to be a Vet? Tips for How to Get Into and Succeed in Vet School.”

2000 – Hillary Gorman Israeli, V’00 is featured in the February 2010 issue of *DVM Newsmagazine*, regarding her online comic video “Generation Vet.”

2002 – Amy Hancock-Ronemus, V’02 and husband James welcomed a daughter Julia on December 1, 2009.

2003 – Nathan Harvey, V’03 passed the ABVP boards in December 2009, and has been chosen as the PVMA 2010 emerging leader of Pennsylvania for the AVMA Annual Leadership Conference.

2001 – Larkin Veterinary Hospital, owned by the National Veterinary Associates, announced the appointment of **Lisa V. Noble, V’01** to the practice in West Lawn, PA.

2003 – Herb Maisenbacher, V’03, assistant clinical professor of cardiology at University of Florida’s Veterinary Medical Center, has been noted in the September 12, 2009 issue of the Horse.com for his treatment of horses with life-threatening bleeding from the guttural pouch by a fungal infection, called guttural pouch mycosis.

2004 – Laura Javscas, V’04, DACVIM has accepted a position as the internal medicine specialist at Upstate Equine Medical Center, outside of Saratoga Springs, NY. After four years at the University of Florida, she is

looking forward to being closer to family and friends in the Northeast.

2004 – Joshua Seth Eaton, V’04 completed a residency in comparative ophthalmology at the University of California, Davis and is now a Diplomate of the American College of Veterinary Ophthalmologists. Joshua has accepted a position as associated ophthalmologist at the Animal Eye Center of New Jersey in Little Falls, NJ, also providing services at Oradell Animal Hospital in Paramus, NJ.

2006 – In August, 2009, Kathleen A. Dunn, V’06 was named Veterinary Chief of Staff and Vice President of Medical Services for North Shore Animal League, a non-profit charitable corporation located in Port Washington, NY that is the world’s largest no-kill pet rescue and adoption organization.

2009 – Heather Balmer, V’09 joined the Animal Hospital of Dauphin County, PA as a staff veterinarian, where she worked as a young person cleaning kennels and exercising pets.

deaths

1989 – Deborah J. Pitt on November 22, 2009.

1985 – Neal C. Ralston on September 28, 2009.

1971 – Carol High on August 26, 2009.

1971 – Peggy Green on July 23, 2009.

1964 – Clark Dickinson on September 12, 2009.

1953 – Glenn C. Bullock on November 9, 2009.

1950 – Arthur H. Peck on August 2, 2009.

1948 – Alan Creamer on January 4, 2010.

1934 – Robert L. Ticehurst on October 28, 2009, his birthday.

Have you received a promotion, gotten married, had a baby or received an award? Have you volunteered somewhere special, moved into a new building, ventured into a new business, or discovered the cure for avian flu? Please share with us all of your good news to include in the CLASS NOTES section of the *Bellwether* and the vet.upenn.edu Web site. All residents, interns and fellows are also invited to share!

Forward all alumni news to Coreen Haggerty, Director of Alumni Relations at haggertc@vet.upenn.edu or write Office of Alumni Relations, 3800 Spruce Street, Suite 172 E, Philadelphia, PA 19104.

contact us



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calendar

APRIL 2010

Tuesday, April 13, 2010

**Friends of New Bolton Center Donor
Recognition Dinner and Lecture**

New Bolton Center, Kennett Square, PA

Please contact Pat Hall at 610-925-6500 for details.

Thursday, April 22, 2010

Animal Lovers Lecture Series: Vaccine Protocols for Dogs and Cats

New Bolton Center, Kennett Square, PA

Presenter: Dr. Meryl Littman, Associate Professor of Medicine, Penn Vet

MAY 2010

Friday, May 14 and Saturday, May 15, 2010

Alumni Weekend 2010

University of Pennsylvania – Philadelphia Campus and New Bolton Center

We remember all Penn Vet alumni with special celebrations for all Penn Vet classes ending in '5 and '0 including the 25th reunion of the Class of 1985 and the 50th reunion of the Class of 1960. Contact: Coreen Haggerty @ haggerty@vet.upenn.edu or 215.898.1481.

JUNE 2010

June 14-17, 2010

Penn Executive Veterinary Leadership Program

University of Pennsylvania, Wharton School – Philadelphia, PA

The first-of-its-kind program designed to provide veterinarians with the advanced business and leadership capabilities they need for making a significant impact as veterinarians and business leaders.

AUGUST 2010

Monday, August 2, 2010

American Veterinary Medical Association Annual Conference
Atlanta, GA

Penn Vet Alumni Reception

Friday, August 13, 2010

**Pennsylvania Veterinary Medical Association
Keystone Veterinary Conference**

Hershey Lodge & Convention Center – Hershey, PA

Penn Vet Alumni Reception

For information on any of these events, contact Darleen Coles, Special Event Coordinator, at coles@vet.upenn.edu or 215-746-2421.

THE UNIVERSITY OF PENNSYLVANIA
SCHOOL OF VETERINARY MEDICINE
INVITES YOU TO



ALUMNI WEEKEND

PENN VETERINARY MEDICINE

**Friday, May 14 &
Saturday, May 15, 2010**

"Old Friends, New Memories"

- ▶ Celebrating all Penn Vet classes ending in '5 and '10. Honoring all alumni
- ▶ **www.vet.upenn.edu/pennvet/alumniweekend2010**

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